

where the procedure is required for direct exposure of lesions such as tumors or granulomatous infections of the spine. There seems little reason to refute this judgment on the basis of the available evidence.

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Immediate Treatment of Spinal Cord Injuries

A PATIENT with a spinal cord injury that is clinically complete at 24 hours, as determined by accurate neurologic examination, will not have functional cord recovery. It is generally agreed that laminectomy is of little value and routine use of it has now been generally abandoned among paraplegists and at spinal injury centers.

Recent experimental evidence indicates that the neurologic damage may be due to edema within the constricting pia mater, which reduces venous return from the cord tissue. This decreases oxygen tension and the neurologic tissue suffers irreversible damage. Cooling of the cord with iced saline solution in the early post-injury phase has shown promise of being a method of avoiding the edema and the increased venous pressures. High doses of steroid administration and myelotomy also have shown some promise of decreasing the destruction of the neural tissue. Some investigators have found evidences of extremely high levels of nor-epinephrine locally in the damaged spinal cord tissue and have demonstrated the microscopic auto-destruction of the cord within four hours following injury. They have shown some ability to reverse this destructive tendency with monoamine inhibitors.

At the clinical level at present, however, there is no method of recovering lost neurologic function in the complete spinal cord injury. Early immediate care should be focused at realigning the spinal canal. Surgical treatment is indicated only for patients who have gross dislocations which cannot be reduced by closed methods. Whether to stabilize the spine surgically or treat it in traction until it heals by body repair mecha-

nisms depends on the judgment of the physician who is responsible for the total treatment program of the patient. There is no evidence that surgical stabilization will increase neurologic return; however, a stable spine allows more rapid rehabilitation training and earlier discharge from the hospital.

Lest bladder infection develop, a Foley catheter should be inserted immediately and the urinary output monitored for 24 hours. At the end of that time the catheter should be withdrawn and the patient treated with intermittent catheterization. This has now been proved beyond doubt the best method by far for treating the "neurogenic bladder" to avoid over-distension and chronic infection.

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Little League Elbow

COMPETITIVE ORGANIZED BASEBALL PROGRAMS for boys in the 8- to 15-year age group have introduced new clinical entities such as Little League shoulder and Little League elbow involving the throwing arms of young pitchers.

Throwing a baseball hard as required by pitchers entails an abnormal whip-like action of the arm which places an unusual traction strain on the shoulder and elbow joints. In growing youngsters this traction strain is transmitted to, or through, the ununited epiphyses.

Comparative roentgenograms of both elbows of 162 youngsters in the 9- to 14-year age group demonstrated the so-called Little League elbow to be primarily involvement of the medial epicondylar epiphysis, with fragmentation, separation and accelerated growth noted in all 80 pitchers in the study. Less common, but more serious, were changes in the form of traumatic osteochondrosis of the capitellum of the humerus, head of the radius, and proximal humeral epiphysis.

Since these changes are caused by repetitious trauma, treatment is primarily preventive—rule changes to limit the amount of throwing by pitchers, and encouraging youngsters to report elbow or shoulder pain immediately and to stop pitching. The symptoms subside rapidly with rest at this stage, and the youngster can then resume